

Allen (C. W.)

The Treatment of Erysipelas.

A Personal Experience in Fifty Cases.

BY

CHARLES W. ALLEN, M.D.,
SURGEON TO CHARITY HOSPITAL, NEW YORK.



FROM

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES,

JULY, 1891.

THE TREATMENT OF ERYSIPELAS.

A PERSONAL EXPERIENCE IN FIFTY CASES.

By CHARLES W. ALLEN, M.D.,
SURGEON TO CHARITY HOSPITAL, NEW YORK.

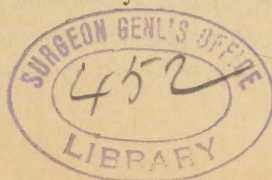
I HAVE prepared for consideration four series of tabulated cases: No. 1 being the cases admitted to Charity Hospital in 1888; No. 2, those in 1889; No. 3, those received up to June 1, 1890; and No. 4, the cases treated by myself outside the hospital. For the opportunity of observing cases in the wards, and for the privilege of publishing them, I am indebted to my colleagues of the surgical staff of the hospital.

The cases in the hospital tables for the two and a half years number 419, and my own cases since January 1, 1889, 47; making a total of 466 cases available for study.

While not bearing directly upon the question of treatment, I may be pardoned if I speak of some points made prominent in the tables before me. Thus of the 300 cases which were received at the hospital during 1888-89, the greater number by far occurred in the winter and spring months, as follows:

December . . . 18	June . . . 13
January . . . 28	July . . . 4
February . . . 49	August . . . 8
March . . . 37	September . . . 12
April . . . 64	October . . . 11
May . . . 47	November . . . 9
Total . . . 243	As against . . . 57

There is no doubt that more patients seek hospital treatment during the cold and damp seasons than during the pleasant months; still, there must be something beside this fact to account for the marked increase of the one over the other season, because the same thing is found in private practice, though in a less marked degree. My experience in town practice corresponds, in a great measure, with the showing of the hospital tables, and I find that the number of cases by months was as follows:



December 2	June 6
January 7	July 0
February 9	August 2
March 5	September 1
April 3	October 2
May 8	November 2
Total 34	As against . . . 13

This demonstration of the greater prevalence of erysipelas in New York during the cold and moist seasons of the year agrees with the results obtained by the majority of investigators who have given attention to the subject in other countries. Carl Haller's statistics, based upon ten years' study of erysipelas at the Vienna Hospital, show the greatest number of cases in April, May, October, and November. Kaposi's observations, carried out over a period of two years and published in 1887, show the largest numbers in March, May, November, and December of one year, and January, February, April, May, and December of the other.

To quote a recent observer, Linden, of Finland, whose study of the question extended over a period of eight years and embraced over 5000 cases, found 27.1 per cent. in the winter, and 20.4 per cent. in the summer months for Stockholm, and 29.2 per cent. in winter with only 18.8 per cent. in summer for Helsingfors: an appreciable difference, though not so marked as that shown in the Charity Hospital record.

The most plausible explanation seems to be the sudden and decided variations in the temperature and moisture of the atmosphere in these seasons, but whether these factors influence the outbreak of the disease by weakening the patient's powers of resistance to the erysipelas coccus or by favoring an increased production or increased activity of the microorganisms outside of the human body is a question which must remain for future solution.

The relative frequency of facial erysipelas is another point made prominent in my tables. Thus of the 419 cases at Charity Hospital 267 were of the facial variety, or 63.7 per cent.

It is quite remarkable to note that of the 531 cases in Kaposi's statistics 336 were facial, or 63.27 per cent., almost an identical percentage.

The table of my personal cases shows, out of a total of 47 cases, 24 instances of facial erysipelas, or about 50 per cent. Of these 18 were so-called genuine facial cases, and 4 were consecutive to trauma or skin disease. Erysipelas of the extremities gives 23 cases, 19 of which followed trauma or skin lesions. There were no deaths from the facial erysipelas, and only 3 from other forms, or 6.4 per cent. The deaths all occurred in infants; one at five months following varicella, and the two others at three weeks of age respectively, both the result of ritual

circumcision done in a bungling manner. Forty-two cases were cured after an average length of treatment or duration of the erysipelatous process of 7.57 days. Two cases passed from observation.

The tables of the Charity Hospital cases show 21 deaths, or 5 per cent., and in the 267 instances of facial erysipelas, 10 deaths, or 3.7 per cent. The average stay in hospital for 56 cases in 1888 was 21 days; for 190 cases in 1889 was 24.3 days; for 116 cases in 1890 was 20.4 days, or a general average of 22 days. Having digressed to this extent, I will now briefly outline the various methods of treatment which I have employed, first, however, giving the course of treatment which has been applied in the Charity Hospital cases.

1. In idiopathic facial erysipelas, as well as in non-traumatic cases elsewhere located, a paint having the following composition is applied over the affected region :

R.—Tinct. benzoin. comp.		℥ij.
Collodion flex.		℥j.
Glycerin.		℥j.

Occasionally, acid. salicylic. $\mathfrak{z}\text{i}$ has been added to the above. Internally, the tincture of the chloride of iron, 20 minims three times daily, is given in a routine manner to nearly all cases.

2. In consecutive cases, *i. e.*, of traumatic origin, where the inflammation is not deep-seated and there is not much tension, this protective and antiseptic paint is likewise employed, and a bichloride solution 1 : 5000 or 1 : 6000 is applied hot to the wound or raw surface. Iron is given as above in these cases.

3. In cases where there is much tension and the integument has been broken by bullæ or otherwise, hot bichloride 1 : 6000 is applied and several coats of the paint are used as a limiting strip above the affected part if upon the extremity, or surrounding it if practicable. The same dose of iron is likewise given in these cases.

The tables show that quinine enters largely into the treatment of the hospital cases, especially those in which a high temperature is present. Other drugs mentioned as being occasionally employed are calomel, digitalis, aconite, belladonna, antifebrin, antipyrine, and bromide for the delirium.

At times the above line of treatment has been deviated from by the trial of spirits of turpentine internally instead of iron, in dose of 10 drops three times daily. This appeared to do as well as the iron in some cases until about the third or fourth day of treatment, when it ceased to be tolerated by the stomach. Occasionally, too, iron has been omitted because it was thought to disagree in some way with the patient, but, as I have said, in the great majority of cases it was given as a matter of course.

Baths of a 2 per cent. solution of creolin have been tried, but without good results. Injections of iodoform in solution have been practised in some cases about the margin of patches with the idea of limiting the progress of the erysipelas, but no appreciable benefit has followed. Tincture of iodine used with the same object in view has resulted not more favorably.

Although my belief is that erysipelas is a disease of more or less definite course, tending, when uncomplicated, to terminate favorably—excepting in the very young, when death almost invariably results—still I believe that by judicious treatment this course can be very materially lessened and in some cases brought to an abrupt termination; and for this reason I cannot agree with those who put faith in no treatment at all, and argue that because erysipelas is one of the diseases in which so great a number of diverse drugs and methods have been advocated, that none is good; nor yet can I accept the dictum of those who take a *laissez aller* view of the matter, thinking that the cases will do well enough if left to themselves.

Since Fehleisen's discovery of the streptococcus erysipelatus and the demonstrations of Hueter and others, which go to show that it is truly an infectious disease in all probability due to the presence and multiplication in the skin and subcutaneous tissues of a micrococcus, methods of treatment have in a measure changed, and the therapy of to-day is based largely upon antiseptic, anti-bacterial, mechanical and surgical procedures.

I presume that all have accepted Fehleisen's experiments with pure cultures in 1882 and the subsequent investigations of others as showing the contagious nature of the disease, and I believe that the future treatment of erysipelas must, in a measure at least, conform to bacteriological findings. Thus it has been found that the streptococcus grows more rapidly in parts well supplied with oxygen, and nothing seems to me more rational than to endeavor in treatment to shut off this supply so far as possible.

In twenty-two of my cases I have endeavored to accomplish this purpose by the application of an occlusive dressing having collodion as a base. In nineteen of them I have incorporated with the collodion ichthyol, and in three cases aristol. In four instances I have employed white-lead paint, as recommended by Lewis for the same purpose; in two I have used an ichthyol ointment; in two a resorcin ointment; in five a strong solution of permanganate of potassium; in seven a solution of the hyposulphite of sodium; in one case a bichloride solution; in one lead and opium; in one a saturated solution of boric acid; and in one the application of the tincture of the chloride of iron. In two instances I have performed scarification, and in two others have applied a tight adhesive strip above the affected area upon an extremity.

I will take up the more interesting cases one by one and speak of the treatment, and its effects as we proceed. First for the "genuine" facial cases.

CASE I.—Female, aged eighteen years. Erysipelas of face, involving first one side and spreading to the other, with formation of large bullæ.

Treatment.—Internal: Tr. ferri chlor. $\mathfrak{m}$ xx every three hours. External: The same locally applied.

Result.—Recovery at end of ten days. The application of iron is not an agreeable dressing, and as it appeared to do no good I have not since tried it.

CASE II.—Female, aged forty-five years. Erysipelas involving whole face and subsequently the scalp.

Treatment.—White-lead paint to cover the whole face. When extension took place to the scalp the hair was cut short and the whole scalp painted. The general symptoms were very severe, and convalescence was not established until the twenty-third day. The paint was removed slowly and with difficulty from the scalp, and I would not advise its application to hairy parts.

In this case the use of the paint did not make a very favorable impression upon me, though the patient and friends appeared well enough satisfied with the result.

CASE III.—Male, aged thirty-four years. Erysipelas of one side of face. White-lead paint. Improvement till seventh day, when extension took place to opposite side of face and patient entered hospital. I saw patient about a week later, when recovery had taken place.

CASE IV.—Male, aged fifty-eight years. Treated with a very weak solution of hyposulphite of soda ($\mathfrak{z}$ j to Oj) and internal symptomatic remedies (antipyrine, bromide). He was convalescent on the eighth day.

CASE VI.—Male, aged fifty years. Erysipelas of face. The same external treatment and iron internally (gtt. x every hour part of the time). The scalp became involved and the disease ran its course in fifteen days. Decided alopecia followed.

CASE VII.—Male, aged fifty-three years. Erysipelas began simultaneously in both ears and extended to the right side of the face. Same external applications. Although extension to cheeks, forehead, and scalp occurred, and large bullæ formed, after seven days the patient was practically well.

CASE VIII.—Female, aged forty-five years. Had previously suffered from erysipelas of face seventeen years before. Present attack began after exposure to cold and wet. After two days of hyposulphite solution locally, iron was given internally. On the seventh day desquamation had begun, there was no longer any fever, and convalescence was rapid.

CASE X.—Female, aged thirty-seven years. Whole face involved and great headache, not relieved by a drachm of antipyrine in divided doses. Great delirium at night. Here I used resorcin ointment in strength of $\mathfrak{z}$ j to $\mathfrak{z}$ j for the face, and a wash of $\mathfrak{z}$ j to Oj for the scalp. Convalescence after eighth day, when wine and iron were given. The daughter of this patient had been a daily visitor at the house of Case VI., often being in patient's room during his illness, and probably in some unknown way brought the cocci home to her mother.

CASE XIX.—Male, aged eleven years. Erysipelas began at back of neck and extended over scalp. A younger brother of this patient was

sick in the same room with migratory erysipelas of the body and extremities (Case XVIII. of table).

Treatment.—Ichthyol ointment $\mathfrak{z}\text{ij}$ to $\mathfrak{z}\text{j}$. In three days the boy was entirely well.

CASE XXIX.—Female, aged forty-four years. Erysipelas of a week's duration, starting from a lachrymal fistula. Involvement of both cheeks and ears and severe general symptoms.

Treatment.—Ichthyol ointment, $\mathfrak{z}\text{ij}$ to $\mathfrak{z}\text{j}$. Antipyrine and whiskey internally.

Result.—Erysipelas at a standstill in two days. Recurrence after four days which lasted for five days, after which patient remained well.

CASE XXX.—Male, aged twenty-three years. Patient has rosacea. The day before my visit erysipelas had begun upon the left cheek. I painted the area over with a solution of permanganate of potassium, gr. xx. to $\mathfrak{z}\text{j}$. This had the effect of aborting the process within two or three days. Some three days later, however, the opposite cheek became affected, and under the same external treatment was well in four days without having spread to scalp or ear.

CASE XXXI.—Male, aged twenty-three years, son of Case No. VIII., which I attended in the same room one year ago. Three days before my visit there had been a decided chill, followed on the next day by a bright-red spot upon the bridge of the nose. There had been no injury or preceding lesion upon the face. When I saw the patient both cheeks, the lower eyelids, and the middle of the forehead half way to the margin of the hair were involved, and extension to the upper lids was just beginning. On the left side the redness extended quite to the ear, while on the right there was an inch and a half of apparently unaffected skin intervening. The usual general symptoms were present. This appeared to me a most suitable case for treatment by scarification. Securing the patient's consent, I placed a circle of criss-cross cuts about the patch upon the forehead midway between its margin and the hair line, extending them down over the side of the forehead and between the border of the erysipelas on the cheek and the right ear. As the disease had already reached as far as the left ear, no cuts were made on this side. I also laid a series of quadrilateral cuts just at the lower margin of the patch on a line with the angle of the mouth upon the right side, the cuts being made equally in the diseased and sound skin, according to the Riedel method, not over half to three-quarters of an inch in length, but quite close together.

Permanganate of potassium, gr. xxx to $\mathfrak{z}\text{j}$, was now applied over the whole surface, including the scarified portion. By the following day the disease had spread beyond the barrier, for about an inch upon the forehead, slightly beyond it on the right side as far as the ear, and not at all in a downward direction either upon the scarified or non scarified side. Neither ear as yet involved. Bullæ over cheeks and forehead. Redness and swelling diminished in region of nose and lower lids. The following day both ears swelled and were included in the painting with permanganate. Two days later there was no pain or tenderness, the face appeared well, appetite good, tongue clearing, bowels regular. The next day the permanganate-blackened crusts were peeling off, and patient regarded himself as well and I so regarded him. No internal treatment had been used.

CASE XXXII.—Female, aged thirty-two years. (Wife of Case XXIV.,

who had twelve days before recovered from an erysipelas of the leg and thigh.) Chill on February 7th, erysipelas beginning in centre of left cheek February 8th and extending by February 11th to the whole face, causing closure of both eyes and almost occluding the nares.

Treatment.—Internally. Whiskey and antipyrine; locally, permanganate of potassium, gr. xxx to $\mathfrak{zj}$.

On the 26th the erysipelas was well, after having extended over the entire scalp.

CASE XXXIV.—Female, aged twenty years. Patient has had two previous attacks; last one a year ago in same room. First seen March 26th, with history pointing to primary erysipelas of the larynx two weeks before. Aphonia still present.

The skin erysipelas began three days previously upon the bridge of the nose, and now involves the whole face and scalp. Eyes cannot be opened, delirium pronounced. Temperature $104^{\circ} +$. Had been treated. Ordered hair cut short, ice-bag to scalp, stimulants at frequent intervals, antipyrine to reduce the temperature. Locally, ichthyol collodion $\mathfrak{zj}$ to $\mathfrak{zj}$ (ichthyol $\mathfrak{zj}$, ether $\mathfrak{zj}$, collodion $\mathfrak{zj}$).

Next day, February 27th, great improvement. Menses occurred. No headache or delirium, less fever. Eyes can be slightly opened. Scalp covered with a 1:3000 bichloride wash. Iron internally. Four days later bullæ on face and scalp had dried into crusts and patient was up.

A month later patient came to me with a sty on the right upper lid, and six days later with a second one, and upon the cheek below was an erythematous spot strongly suggestive of a return of the erysipelas. I incised the styes, washed out with a bichloride solution, and prescribed a zinc oxide ointment for the erythematous blush, under which it entirely disappeared. Three days later, however, a bright-red, tender spot appeared just in front of the ear and upon the cheek on the left side. I now ordered to be applied twice daily a solution of permanganate, gr. xxx to $\mathfrak{zj}$. By the following day the whole face was again covered by erysipelas and the eyes closed by swelling. There was some pain from the strong permanganate, so I substituted a 1:1000 solution of same to be applied hot. Three days later patient was up, the face free from swelling and beginning to desquamate. Patient remained well for three days, when a recurrence took place in one cheek. Ichthyol $\mathfrak{zj}$ to water $\mathfrak{zj}$ was applied, and iron was given in 15-drop doses every three hours. In two days symptoms were all absent, and no further recurrence took place.

CASE XXXV. occurred in a German woman, aged sixty-eight years, who had a hemiplegia of six years' standing, and was otherwise debilitated. Whole face and scalp were affected and there were severe general symptoms. Low muttering delirium day and night; dry, glazed tongue, sordes, etc.

Locally, permanganate gr. x to $\mathfrak{zj}$, abundant supply of alcohol, and iron $\mathfrak{mxx}$ every three hours.

Thirteen days later patient was up attending to household duties. Fifteen days subsequent to this date a recurrence took place, but under the same treatment she was entirely well in four days.

CASE XXXIX.—A pregnant woman, aged thirty-seven years, had four weeks previously recovered from an erysipelas of the face treated with lead and opium wash, under the care of another physician. I saw patient the day after a recurrence had taken place, and ordered ichthyol

collodion and iron $\mathfrak{m}\mathfrak{xv}$ every two hours. Case terminated favorably six days later.

CASE XL.—Female, aged twenty-five years. Erysipelas of whole upper portion of face, and eyes nearly closed. Treatment by ichthyol collodion $\mathfrak{zj}$ to $\mathfrak{zj}$. Cure in three days.

CASE XLIII.—Female, aged seventeen years. Patient had just recovered from a tonsillitis. Erysipelas of left cheek, treated with ichthyol collodion and entirely well in three days, without extending.

Six other cases of facial erysipelas were subsequent to trauma or skin diseases, but presented all the features of the other cases. One started in an unhealed varicella pustule upon the ear of a girl of seven years and spread to the face and scalp. It was treated with ichthyol collodion and was well in five days. Another developed upon a scalp the seat of an impetigo, and was well under the same treatment in four days.

CASE XLI.—Female, aged twenty-three years. Six days after a scalp wound, in which several stitches were taken, erysipelas began upon the opposite side of the scalp at some distance from the wound and extended down over the forehead and cheek. I cleansed the wound, which was still discharging pus, and dressed it with aristol powder. To the erysipelas of the scalp I applied a 10 per cent. solution of ichthyol in water, and to the face ichthyol in collodion. In eight days patient was entirely well and wound had healed. At no time had there been any evidence of erysipelas very near the wound, although both sides of the face became affected.

CASE XLIV.—Female, aged sixty years, who had the most extensive gummosus ulceration of the entire scalp which I have ever seen. There was an open ulcer the size of a half-dollar just within the hair line, and it was undoubtedly through this that inoculation took place. The whole face and both ears participated in the erysipelatous process, but the scalp remained free.

Treatment.—Solution of aristol in collodion, 5 per cent., and aristol powder freely applied to the open ulcers upon the scalp. The erysipelas was well upon the eighth day, when I made my last visit.

This case of neglected and untreated syphilis subsequently showed most rapid improvement under antisyphilitic remedies, with aristol applied locally to the ulcers.

CASE XVII.—Female, aged twenty-six years. Erysipelas of hand and arm. The special interest in the case is that the patient is the subject of marked elephantiasis of the legs, the right being much enlarged. Until this attack, it was not known that the upper extremity was affected with elephantiasis as I subsequently found it to be. There have been two previous attacks of erysipelas of the legs. I saw patient the day after erysipelas had begun in the hand, and painted the hand and arm with white-lead paint, and ordered some anodyne and antipyretic remedies. The heat and pain were so great in the night that the paint was removed and ice-cold cloths applied by the advice of another. These proved so soothing that the patient placed her hand upon the cake of ice which was kept at the bedside to cool the cloths, and went to sleep. At my next visit the fingers were icy cold, insensible, and presented a bluish, frozen appearance. I refused to give patient further advice excepting that

she enter the hospital. This she did, and there had removed the distal phalanges of three fingers and the thumb.

CASE XXXVI. refers to this same patient. About a year after the unfortunate occurrence above narrated, I was called to attend her for an erysipelas of the left leg and foot, which had begun two days before in the region of the knee and had rapidly extended to the foot. The leg appeared enormously enlarged in consequence of the elephantiasis from which she suffered. I at once painted the whole area with ichthyol ʒij, ether ʒj, collodion ʒj, and gave internally:

R.—Quin. sulph.	.	.	.	.	.	.	.	ʒss.
Tinct. fer. chlor.	.	.	.	.	.	.	.	ʒij.
Aq. dest.	.	.	.	.	.	.	ad	ʒij.—M.

S.—One drachm every two hours.

In four days the patient was well and out of bed.

These attacks of erysipelas in elephantiasis have not been looked upon by some dermatologists as identical with the true erysipelas, but rather regarded as a species of lymphangitis. I must say, however, that I cannot take this view of the case in point. The appearances and symptoms entirely resembled those of other cases of erysipelas of the extremities, and I never saw a more typical instance of the disease than that presented by this patient's hand and arm the year before. There was in the case of the hand, as in that of the leg, marked striæ and cords of lymphangitic inflammation extending to the glands in the axilla and groin, attended with great tenderness and pain; but the same thing is often observed in ordinary erysipelas of the extremities without elephantiasis. This was true of Case XXIV. An erysipelas of the leg in a man aged forty-five years, not attributable to trauma, was attended with very decided lymphatic involvement causing painful red cords to extend from the patch to the groin, where the glands became very greatly enlarged. The usual ichthyol paint was applied over the whole extent of inflamed tissue in this case as well, and the iron and quinine mixture above mentioned was given internally. Patient was well in six days, though gland in groin remained tender for some days afterward.

As illustrating in a graphic manner the identity of this form of erysipelas and genuine facial erysipelas, the wife of this patient, who had carefully nursed him during his illness, was taken down with facial erysipelas twelve days after the latter's recovery, and hers is Case No. XXXII. of the present report and has already been referred to under the non-traumatic series of cases. One case developed from vaccination in a child of ten months, and four started in a varicella lesion.

One of these (Case XXVIII.), in a five-months' girl baby, proved fatal on the thirteenth day of the disease and five days after I first saw it. This was one of the cases in which I employed scarification. The erysipelas, which had begun in a varicella pustule upon the leg eight days before, had now extended up the back to the shoulders, over the

thorax in front, to the ankle on the left side, and to below the knee on the right. The prognosis was most unfavorable, but I thought scarification offered a chance of checking the upward spreading. I made crossed incisions deep enough to draw blood about an inch above the margin of disease, according to Lauenstein's method, entirely surrounding the chest. On the right leg I made the incisions just in the border, extending equally into the patch and the healthy skin. On the opposite leg the same was done just above the ankle. The whole was then washed with a bichloride solution 1 : 1000, and this was also used as a dressing for the whole affected area. By the following day the margin of redness had extended slightly beyond the scarification upon both legs. On the right side of the chest it had gone about half an inch beyond both behind and in front, but on the left side the erysipelas had stopped exactly at the boundary line. General appearance of child improved. Brandy in frequent doses.

On the following day child began to cough and was very restless and weak, with faint moaning cry. Left leg and genital region much swollen and oedematous. No further extension beyond the scarified barriers excepting upon the right side of thorax, where the pink line has advanced about half an inch. The physician who had attended the child during the first days of its illness now again took charge of the case, which terminated fatally three days later.

CASE XXVII.—Brother of last case, aged one and a half years. Varicella had begun at same time fourteen days before, and erysipelas had shown itself coincidentally in both children eight days before I saw them. Here the dorsum of the foot was first affected in the neighborhood of a varicella lesion. Great prostration, complete anorexia, very weak pulse. Treatment up to this time had been iron internally and cold-water dressings. Ordered iron continued and brandy in frequent doses. Milk, etc. The affected areas and healthy skin beyond were thickly covered with ichthyol collodion.

Next day, no extension, slight improvement in general symptoms. Following day, extension to scrotum and pubic region, with great swelling. Ichthyol continued to the whole.

For three days both cases were in care of another physician. I now resumed charge and continued the ichthyol locally to leg, scrotum, and penis, which were enormously enlarged. One week later the boy was convalescent.

CASE XXXVIII.—Male, aged four months. Erysipelas of right leg and thigh, beginning in a varicella poek and rapidly extending. Patient had lived till recently with the grandmother, whom I had treated the preceeding year for a severe erysipelas of the face (Case No. II.).

Treatment.—Ichthyol collodion, and internally iron, quinine, and brandy.

Following day, extension to groin. Fifth day, patient well.

CASE XX.—Male, aged three weeks. Erysipelas migrans gradually extending over the whole body, the head alone escaping. Disease began upon the genitals about a week after circumcision so badly done that the skin had been removed from the whole under surface of the penis down to the peno scrotal junction. In this case the erysipelas wandered for a second time over regions where recovery had apparently taken place. Finally, the day before death the bullæ became hemorrhagic,

cedema of the skin in the region of the throat occurred, the breathing became much oppressed and the child sank rapidly.

Treatment had consisted in ichthyol collodion and ichthyol ointment to the wound upon the penis.

CASE XLVI.—Male infant aged three weeks. This child had been circumcised upon the eighth day, and when I saw him presented an extensive triangular wound left by the *moël*, who had removed the *frænum* and a large portion of the skin from the under surface of the penis just as in the preceding case.

Seven days later and two days before my visit a redness and swelling had appeared in the left groin. This was regarded by the physician who first saw the case as a beginning bubo. By the time of my examination, however, the erythema had extended to the scrotum, pubic region, and the inner and posterior surface of the thigh. Up to this time lead and opium wash had been employed without apparent benefit. Prognosis extremely unfavorable.

Having had what appeared to be a very favorable result from *aristol* in a case already related, I painted the whole surface over with a 5 per cent. solution in collodion of this new preparation, extending it beyond the margins of the disease. I also applied *aristol* powder to the wound. Internally, brandy.

Extension by next day to middle of back and over buttocks, downward to upper third of right thigh and to middle of left, entirely surrounding both limbs. I did not see child again, but was notified by the physician in charge that it died some three days later.

Another case in which *aristol* was used with good results is Case XLV., first seen on June 11th, one day after an erysipelas had shown itself near a lesion of *ecthyma* upon the leg of a boy aged nineteen months. At that time it extended from the middle of the thigh to the ankle. I applied a tight adhesive strip of plaster above the patch, as well as about the ankle below it, and painted the intervening space with a 5 per cent. *aristol* collodion. Brandy internally. The following day large bullæ had formed beneath the plaster bands and an erythematous blush extended for a slight distance beyond. The adhesive strips were removed and the whole surface was again painted with *aristol* collodion. Two days later erysipelas had extended above the rim of the pelvis. I now applied ichthyol $\frac{3j}{\text{to } \bar{3}j}$ of collodion, as I could not obtain *aristol*. Extension next day to middle of back. *Aristol* collodion was now used again, and no further extension took place; the bullæ dried into crusts, and improvement rapidly followed.

The last case is in some ways the most satisfactory. It occurred on August 7th of the present year in the person of a three-year-old boy at a seaside hotel. Following a chill and high fever, erysipelas began simultaneously at both legs at about an inch distant from a pustule of unknown nature situated upon the anterior portion of either shin. When I examined the child I found a patch upon the left leg two inches in width almost surrounding the limb, and upon the opposite side a smaller patch. I at once bound up both legs in a solution of hyposulphite of soda in strength of $\frac{3j}{\text{to } \bar{3}j}$. Temperature was then $103\frac{1}{2}^{\circ}$ F. The same evening, in consultation with the family physician, Dr. Stub, of Brooklyn, a solution of iodine in collodion gr. x to $\bar{3}j$ was applied to the patches and about an inch beyond them. Later in the night the rectal temperature was 107° and there were some convulsive movements and delirium.

Antifebrin gr. v. was now given with whiskey and repeated every three hours. Several slight chills occurred and there was extension of the process about an inch beyond the painted margin on the left side.

The following morning temperature 105°, and gradual creeping of disease toward the knee. Application was made an inch beyond erysipelas margin as often as spreading was noticed. By evening the temperature was 106°, and the patch had nearly reached the knee. I now applied several coatings of the paint one above the other just below the knee, and going above it I surrounded the lower third of the thigh with a tight band of adhesive plaster one inch wide. By the morning of the 9th the erysipelas had extended over the knee and the whole leg was now tensely swollen, painful and tender, with bullæ forming posteriorly. I found the plaster had just been removed because of complaint of tightness, but I at once reapplied it and forbade its being disturbed. During the day the disease extended to the lower border of the adhesive band, where it stopped abruptly. The temperature fell and convalescence began. The erysipelas was at an end in three days, but where the iodine had been applied in several coats below the knee there was a burning of the skin which took ten days to heal. The erysipelas had gone beyond the thick coating of iodine, but had been arrested so suddenly at the plaster that the family physician and friends were convinced equally with myself of the efficacy of this method, first proposed, I believe, by Wölffler, and recently recommended by Dr. Weber, of this city.

Other attempts at formation of a barrier have failed in my hands, excepting the partial success following scarification. I had previously tried iodine and strong solutions of silver, but do not remember a successful case. It has seemed to me that the power of the cocci to penetrate deeply into the tissues and their mode of travelling through the lymph channels rendered any method dealing with the surface alone as unlikely to check the spread. I can understand, however, how pretty firm compression of all the tissues of a limb, as by a tight band, might act in checking the onward march of the microorganisms. It is at least a rational procedure.

Scarification has had much said in its favor, and I have no doubt proves and will prove beneficial in some cases. To be successful, however, it must be repeated on successive days and one line of cuts after another be made as the spreading oversteps the attempted barrier. It is not an entirely new method, as many suppose. Leuroth proposed a method of treatment in the *Gazette Medical de Strasbourg* in 1870 which consisted in superficial linear scarification over the patch with others made so as to circumscribe it. Should the disease overstride this boundary, it was to be tried again.

Dobson is said to have proposed much the same process as early as 1828. Kraske, of Freiburg, operated first by scarification in 1886. After making crossed incisions he applied a five per cent. solution of carbolic.

Riedel in 1887 did the same thing in a number of cases, employing a

1 : 1000 sublimate instead of carbolic, and Lauenstein modified this in 1889 by cutting only in the sound skin. The latter is the process which strikes me most favorably.

Among other recently advocated modes of treatment (and new ones are being daily added, a fact which shows rather that anything may appear to do good in uncomplicated cases running their natural course); is that of Behrend,¹ consisting of the application of absolute alcohol; that of Hueter, who advises injections of a 3 per cent. carbolic solution to encircle the patch. If a case is thus treated in an early stage, it is said to be possible to stop the whole process within twenty-four to forty-eight hours. J. Koch paints the diseased parts once daily with an ointment of

R.—Creolin	1 part.
Lanolin	10 parts.
Iodoform	4 parts.

and over this applies gutta-percha tissue. Kroell advises a band of gutta-percha in place of Wölfler's adhesive strip.

Calvelli uses a 1 per cent. solution of picric acid to paint over the erysipelas. Pirogoff, it will be remembered, treated a large series of cases by camphor, I believe in the army, with excellent results. (His paper is not now accessible to me.) Rosenthal² has employed with marked success a combination of the Pirogoff and Hueter methods, giving $2\frac{1}{2}$ grains of camphor at a dose.

Levy proposes³ a spray of corrosive sublimate in ether 1 : 100, to be applied for a few minutes twice daily. Under this the fever in his cases lasted but three and a half days, while other methods showed eight days of fever.

With the most of these latter suggestions I have had no experience. In view of what I have learned from those cases which have fallen under my observation, I think the plan of treatment which offers the best results is about as follows:

First, internally, such symptomatic treatment as the nature of the case seems to require. Antipyretics only in case of high or persistent fever (over $103\frac{1}{2}^{\circ}$ to 104°). Then antipyrine in dose of at least gr. xv-xx, for an adult, guarded by alcohol. Cooling drinks. Calomel or saline aperients in full dose if constipation. If much weakness, alcoholic drinks given freely, especially at critical periods, and iron or iron and quinine; digitalis if much fever and prostration; bromides for delirium; antipyrine or phenacetin for headache, with cold applications to head, and as concentrated and nutritious a diet as possible.

Second, locally, I would paint the patch and surrounding margin of

¹ Berlin klin. Wochenschrift, 1889.

² Ibid., No. 42, 1889.

³ Médecine Moderne, No. 20.

healthy skin thickly with ichthyol in collodion, $\bar{3}j$ - $\bar{5}j$ to $\bar{3}j$. If the scalp is the region affected, a watery solution or ointment of ichthyol can be employed. To arrest the spread I should in every case make an attempt either with the band of adhesive plaster or by scarification, or both, the latter to follow the former, in case the disease spreads beyond the adhesive strips. In erysipelas of the face which had not yet reached the forehead, or at least its upper part, I would apply a band tightly about the forehead and just above the ears, cutting the hair in a strip around if necessary to secure firm pressure. The chances of arresting the process here should be at least equal to those of checking the spread upon an extremity, for we have a hard bony base over which to make our compression. If the boundary is passed, then I should at once have the scalp shaved and apply another band higher up. The hair should be cut in any case in which the scalp is invaded or threatened. Then the same application of ichthyol in collodion can be made, as to the face or other part. If there be much tension, swelling, heat, and discomfort, (which is not apt to be the case under collodion), any oily substance can be applied over it.

In treating erysipelas the uncertainty of *prognosis* must always be kept in mind. Cases to all appearances mild in the beginning may become severe and prove fatal, while formidable appearing areas may suddenly cease spreading spontaneously. It is scarcely more safe to say a case will progress favorably (though the great majority do) than to claim that the particular line of treatment instituted has prevented an unfavorable termination, or proven abortive, unless a whole series of cases under a given method have terminated in a shorter than the average time.

Naturally, when the erysipelatous process has its sources in a pus collection such as an abscess, pustule, ulcer, foul wound, carious tooth, diseased duct, etc., the first care must be to secure as prompt and thorough disinfection and cleansing as possible. Pus must be destroyed and purity maintained. A solution of the peroxide of hydrogen will often be found useful in effecting this purpose. In such case a spontaneous halt may be hoped for. In the same way a diseased mucous membrane must be cared for; excoriations, ulcerations, rhinitis or other disease of the nasal mucous membrane or affection of the throat must be looked after. It is probable that every case of facial erysipelas starts from some local solution of continuity either upon the skin or adjacent mucous membranes, and we simply call some cases "idiopathic" or "genuine" when we fail to find the point where the micrococci have entered. I further believe it is because of this close proximity of various mucous membranes that erysipelas of the face is so comparatively frequent. That so-called idiopathic erysipelas of the face is identical with the traumatic variety I think is shown by the clinical history, course, and identity of the skin

lesions in both processes, as is illustrated by Cases XXIV. and XXXII., where the husband's recovery from erysipelas of the leg was coincident with an outbreak of facial erysipelas in the wife. Since instances of direct contagion are not often seen, I would call attention to the frequency with which two cases occurred in the same family—no less than six times in the 47 cases. Twice husband and wife, twice in brothers, once mother and son, and once grandmother and grandchild. It will be noted in the histories given that internal treatment played a very unimportant part, and I am convinced that cases do quite as well without the large doses of iron so habitually given in this country.

As a prophylactic measure in those predisposed to repeated attacks, great care should be taken to discover and cure affections of mucous membranes, carious teeth, ulcerations, or other disease processes or conditions which I have mentioned as possible means of maintaining the tendency. Recurrences after apparent cure must be kept in mind and treatment continued sufficiently long to prevent them.

Since this paper was written I have applied the adhesive strip in three cases. Two were in erysipelas confined to the lower extremity. In the third it had already extended over the buttocks to the lumbar region before I saw the case. In the latter I applied a strip nearly two inches wide tightly about the abdomen, and painted the patch with 10 per cent. of aristol in collodion. No spreading occurred, and convalescence began at once. In one of the other cases the same treatment was successful, but failed in the second to arrest extension of the disease.

The American Journal OF THE MEDICAL SCIENCES.

MONTHLY, \$4.00 PER ANNUM.

WITH 1891 THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES enters upon its seventy-second year, still the leader of American medical magazines. In its long career it has developed to perfection the features of usefulness in its department of literature, and presents them in unrivalled attractiveness. It is the medium chosen by the leading minds of the profession on both sides of the Atlantic for the presentation of elaborate Original Articles; its Reviews are noted for discernment and absolute candor, and its Classified Summaries of Progress each month present an epitome of medical advances gleaned by specialists in the various departments. According to unquestionable authority, "It contains many original papers of the highest value; nearly all the real criticisms and reviews which we possess, and such carefully prepared summaries of the progress of medical science and notices of foreign works that from this file alone, were all other publications of the press for the last fifty years destroyed, it would be possible to reproduce the great majority of the real contributions of the world to medical science during that period."

The Medical News.

WEEKLY, \$4.00 PER ANNUM.

THE practical value of THE NEWS is proved by its continually increasing subscription list. Every method of conveying serviceable information is utilized. Leading writers, teachers, and practitioners furnish original articles, clinical lectures, and brief practical notes; hospital physicians and surgeons detail the latest approved methods developed under their enormous opportunities; progress is gleaned from the best journals of all civilized nations; a special department is assigned to important abstracts requiring ample space for adequate presentation; able editorial writers deal with important questions of the day; medical literature is impartially reviewed; society proceedings are represented by the pith alone; correspondence is received from medical men in position to know all occurrences of medical importance in the districts surrounding important medical centres, and matters of interest are grouped under news items. THE NEWS, in short, is a crisp medical newspaper, a necessity to every practitioner. Its sphere is different from and complementary to that of the ideal medical magazine, THE AMERICAN JOURNAL. To lead every reader of either to prove for himself the value of the two combined, the commutation rate has been fixed at the rate of \$7.50 per annum.

The Year-Book of Treatment for 1891

Gives a classified summary and review of the real advances in treatment made during 1890, in all departments of the science of medicine. Price \$1.50; or in combination with either or both the above journals, 75 cents. *Now ready.*

The Medical News Visiting List for 1891

Published in four styles: Weekly, dated, for 30 patients; Monthly, undated, for 120 patients per month; Perpetual, undated, for 30 patients weekly per year; Perpetual, for 60 patients weekly per year. The first three styles contain 32 pages of important data and 176 pages of assorted blanks; the 60-patient perpetual consists of 256 pages of blanks. Price, each, \$1.25. In combination with either or both above periodicals, 75 cents. Or, JOURNAL, NEWS, VISITING LIST and YEAR-BOOK, \$8.50. Thumb-letter index for VISITING LIST, 25 cents extra.

LEA BROTHERS & CO., PUBLISHERS, PHILADELPHIA, 706 & 708 Sansom Street.